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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/601,615

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George B. Byma

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04/03/2009

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/601,615 | Applicant(s) BYMA ET AL. | |
| | Examiner Ula C. Ruddock | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9,21-25 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9,21-25,27-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 19, 2009, has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Double Patenting

3. Claims 1-9, 21-25, and 27-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-5, and 18-30 of copending Application No. 10/440708. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection is maintained.

4. Claims 1-9, 21-25, and 27-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 and 19-29 of copending Application No. 10/440800. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection is maintained.

5. Claims 1-9, 21-25, and 27-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-7, and 22-34 of copending Application No. 10/440889. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Rejection is maintained.

Claim Rejections - 35 USC § 103

6. Claims 1, 3, 4, 22, 24, 25, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) in view of Michael (US 2003/0121989). Arthurs discloses a laminate suitable for use as a headliner comprising polyurethane foam core layer which is bonded by an adhesive to glass fiber reinforcing layers (col 1, ln 41-50). Arthurs discloses the claimed invention except for the teaching that a reinforcement layer comprising carbon fibers is secured to the polyurethane foam layer.

Michael discloses a headliner [0002] comprising fibers selected from a group consisting of natural fibers, synthetic fibers, and mixtures thereof. Natural fibers include sisal, hemp, and kenaf fibers and synthetic fibers include carbon fibers [0007]. The resinous binder that binds the fibers together includes a thermoset resin including a urethane resin binder [0010]. It would have been

Art Unit: 1794

obvious to one having ordinary skill in the art to have used Michael's carbon fibers and thermoset binder in the laminate of Arthurs, motivated by the desire to create a laminate having enhanced lamination strength. Regarding claim 24, it also would have been obvious to one having ordinary skill in the art to have used Michael's natural fibers and thermoset binder (i.e. urethane) in place of Arthurs' glass fibers, motivated by the desire to create a laminate that has increased strength yet maintains its lightweight properties. Regarding claim 26, it is the Examiner's position that the use of Michael's carbon fibers would result in a laminate comprising fibers with a degradation point above the incineration point of the other materials of the laminate.

It is noted that Arthurs teaches a material wherein the core density and thicknesses are within the claimed ranges. Further, with regard to the limitations regarding the claimed tensile strength of the basalt fiber, it is reasonable to presume that since the fibers are made of the same material they would necessarily have the claimed strength. With regard to the limitation that the laminate is "adapted to be incinerated" such that the laminate is reduced to ash and basalt fiber, since no structural changes are set forth with regard to the claimed adapting, it is reasonable to presume that the structure of Arthurs as modified by Michael would meet this limitation.

Rejection is maintained.

7. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 2003/0121989), as shown above, and further in view of Michael (US 2003/0124271). Arthurs and Michael '989 disclose the claimed invention except for the teaching that the carbon fibers are produced from petroleum pitch and that the carbon fibers comprises at least 50% of the total weight of the mat. Michael (US 2003/0124271) discloses a

headliner [0028 and 0052] comprising a mat made of carbon fibers [0007]. The carbon fibers can be pitch carbon and be present in an amount from about 10-50% by weight based on the total weight of the mat [0038]. It would have been obvious to one having ordinary skill in the art to have used Michael's 50% pitch carbon as the carbon fibers in Arthurs and Michael '989, motivated by the desire to create a headliner that is lightweight and less costly to manufacture.

Rejection is maintained.

8. Claims 6-8, 21, 23, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 2003/0121989), as shown above, and further in view of Fletemier et al. (US 6,156,682). Arthurs and Michael disclose the claimed invention except for the teaching of the additional layers in the headliner as taught in the present invention.

Fletemier et al. (US 6,156,682) disclose a vehicle headliner comprising a fibrous core, a thermosetting resin, chopped fibers applied to opposite sides of the core layer, a decorative layer, and an impervious film and finish scrim applied to the opposite side of the core (col 2, ln 3-10). The fibrous reinforcement layers comprise basalt fibers (col 4, ln 16-18). As seen in Figure 1, reference point 22 is a decorative covering, reference point 19 is a polymer film, reference points 14 and 16 are fibrous reinforcement layers, reference point 12 is the core, reference point 18 is a polymer film, and reference point 20 is a scrim. The adhesive resin is an elastomeric thermosetting resin, preferably a curable urethane (col 5, ln 19-20). It would have been obvious to one having ordinary skill in the art to have used Fletemier's scrim layer in the laminate of Arthurs and Michael, motivated by the desire to create a laminate with increased strength. It also would have been obvious to have used Fletemier's basalt fibrous reinforcement layers in the laminate of Arthurs and

Michael, motivated by the desire to create a headliner that is lightweight and less costly to manufacture.

Rejection is maintained.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 003/0121989) and Fletemier et al. (US 6,156,682) as applied to claim 6 above, and further in view of McConnell et al. (US 4,812,186). Arthurs and Michael and Fletemier et al. disclose the claimed invention except for the teaching that there is a layer of adhesive interposed between the core and the first and second structural reinforcement layers. McConnell et al. (US 4,812,186) disclose a headliner (col 1, ln 11-13) comprising a first polyurethane adhesive (col 2, ln 19-30) and a second adhesive made of a similar adhesive composition as that applied in the first adhesive (col 3, ln 1-11). The adhesive penetrates the reinforcing layers and serves to the reinforcing layer, when cure, to the core material. It would have been obvious to one having ordinary skill in the art to have used McConnell's adhesive layers in the headliner of Arthurs and Michael and Fletemier et al., motivated by the desire to create a headliner that has increased structural integrity and dimensional stability.

Rejection is maintained.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/U. C. R./

/Ula C Ruddock/
Primary Examiner, Art Unit 1794